

PATENT

Attorney Docket No: BRI/016

REMARKS

The April 3, 2006 Office Action again rejected all pending elected claims over U.S. Patent No. 4,224,487 to Simonsen. The present amendment amends claims 20, 25, and 26. It is respectfully submitted that pending independent claims 1, 20, and 21 each include limitations that clearly distinguish Simonsen.

Claim 1 recites "a projectile formed of polymer as an integral part of said housing." The claimed integrally-formed polymer (and thus electrically non-conductive) projectile provides reduced complexity, easier assembly, and enhanced reliability. Applicant respectfully traverses the Examiner's statement that the integrally-molded projectile was obvious "since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art." (Office Action, pp. 5 and 6 (citing Howard v. Detroit Stove Works, 150 U.S. 164 (1893))). Howard predates the 1952 Patent Act, and does not establish any rule concerning obviousness under 35 U.S.C. § 103. The Board of Patent Appeals and Interferences has consistently so held, expressly overturning rejections based on Howard of one-piece elements over two-piece prior art. Each time, the Board reiterates that an obviousness rejection always requires consideration of the invention as a whole, with a fact-specific analysis pursuant to Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966), dismissing conclusionary and/or hindsight assertions that it would have been obvious

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to form the disclosed two-piece items as one part. A few such decisions are attached in the following Appendix.

Turning to the specific facts of this case, it would not have been obvious in view of Simonsen to form a projectile as an integral part of a circuit breaker housing as recited in claim 1. Simonsen itself contains no suggestion to form a housing and projectile as one part. And to the contrary, one of ordinary skill in the art reviewing Simonsen would have been taught away from doing so. As in In re Muench, Jr. (copy of BPAI decision attached),¹ also involving a fuse, the *difference in the functions of the respective parts teaches away from* forming them integrally. Here the projectile is a moving part, whereas the housing is static; integrally forming moving and static parts is far from obvious - it is counterintuitive. Applicant found that the projectile and housing can be formed integrally, however, by forming a region of connecting material that is configured (as shown in Figs. 1 and 2, and explained on page 8 of the specification) to break upon output with enough energy to accelerate the projectile to the required velocity.

The foregoing arguments also apply to independent claim 21, which recites the limitation, "means for breaking said electrically conductive portion using the output of said pyrotechnic igniter," pursuant to 35 U.S.C. § 112, ¶6. It is submitted that the prior art of record does not disclose

¹ Muench and the other attached BPAI cases - though not binding precedent - correctly state the law and demonstrate a clear and consistent position by the Board on this issue, and are useful in their application of the law in similar specific contexts.

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the structure disclosed in Applicant's specification or an equivalent thereof.

Finally, regarding independent claim 20, the previously added and then amended limitation was rendered moot in light of the Examiner's interpretation of the "electrically conductive portion" as consisting only of Simonsen's filament (15) and not including its conductors (11). Claim 20 has been rewritten to obviate this, and now recites:

an electrically conductive portion having two ends each including a bolt hole, said electrically conductive portion being an integral single piece that has a uniform thickness throughout the distance between said bolt holes

The electrically conductive portion between the bolt holes in Simonsen is NOT "an integral single piece" as claimed, and consists instead of three discrete parts: left and right bus bars (11), and a filament (15) held in "contact" (see, e.g., col. 3, line 13) between them. Further, Simonsen's electrically conductive portion does not have "a uniform thickness throughout the distance between [the] bolt holes" as claimed, having instead two very distinct and different thicknesses, namely, that of the bus bars, and that of the filament. Nothing in Simonsen discloses or suggests the possibility of an alternative embodiment in which the bus bars and filament are integrated into a single piece, or in which the thickness of the electrically conductive portion between the bolt holes is uniform. This is not just a technical distinction - to the contrary, Simonsen is not amenable to being modified to make the

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thickness uniform, because increasing the thickness of the filament enough to support bolt holes would - even if possible - require completely reworking the various parts of the circuit breaker (including the cutting blade, igniter, etc.) such that it would not be suitable for the disclosed context. Applicant's claimed uniform thickness, single-piece electrically conductive portion reduces complexity, simplifies assembly, and enhances reliability.

Conclusion

For the foregoing reasons, it is respectfully requested that the presently amended application be allowed. The Examiner is invited to telephone the undersigned to expedite the prosecution of this application.

Form PTO-2038 is included herewith to cover the \$430 fee for a one-month extension, hereby requested.

Respectfully submitted,

Dated: July 8, 2006

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Attached: Appendix

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRANK JOHN SORRENCH, Jr., GORDON THOMAS BORCK
and ALLEN LEROY JOHNSON

Appeal No. 2001-0114
Application 09/240,712

ON BRIEF

Before BAIRISTON, FLEZING, and GROSS, Administrative Patent Judges.

FLEZING, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 12 and 16 through 27.

The invention relates to a current limiting fuse. Figure 1 shows a cutaway side view of a current limiting fuse of the invention with two winding supports. See page 3, lines 31 through 32, of Appellants' specification. In particular, the

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winding supports 105, 110 are contained in a cylindrical tube 135 that is sealed on each end by caps 140, 145. The caps 140, 145 are connected to plates 150 and 155 which are mounted to the ends of the winding supports 105, 110. See page 4, lines 28 through 32 of Appellants' specification. Appellants disclose on pages 6 and 7 of the specification that using a separate winding support for each element reduces problems associated with maintaining the separation between the elements in operation and in filling the fuse with silica sand. Furthermore, the winding support allows control and maintenance of the positioning needed for proper operation. See page 6, line 29, through page 7, line 5, of Appellants' specification. Furthermore, the end plates 145, 150 support and position the individual winding supports thereby fixing the winding supports 105 and 110 to prevent movement of the elements that could adversely affect the operation of the fuse. See page 7, lines 1 through 5, of Appellants' specification.

Representative claims 1 and 16 are reproduced as follows:

1. A high current fuse comprising:

a housing;

a first electrically-conductive cap attached to a first end of the housing;

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a second electrically-conductive cap attached to a second end of the housing;

at least two winding supports positioned in the housing, extending between the caps, and spaced from one another;

at least one electrically-conductive element wound around a first one of the winding supports and electrically connected to the caps; and

at least one electrically-conductive element wound around a second one of the winding supports and electrically connected to the caps;

wherein at least a portion of both of the two winding supports is defined by a single structure.

16. A high current fuse comprising:

a housing defining a central longitudinal axis;

a first electrically-conductive cap attached to a first end of the housing;

a second electrically-conductive cap attached to a second end of the housing;

at least two non-coaxial winding supports positioned in the housing spaced from one another and extending between the caps;

at least one electrically-conductive element wound around a first one of the winding supports and electrically connected to the caps; and

at least one electrically-conductive element wound around a second one of the winding supports and electrically connected to the caps;

wherein at least a portion of both of the two non-coaxial winding supports is defined by a single structure.

REFERENCES

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The references relied on by the Examiner are as follows:

Grzeszkowski	3,145,282	Aug. 18, 1964
Cameron	3,569,891	Mar. 9, 1971
Knaupp, Jr.	3,962,666	Jun. 8, 1976

RESTRICTION BY ISSUE

Claims 1 through 4, 7 through 12, 16 through 21 and 24

through 27 stand rejected under 35 U.S.C. § 103 as being

unpatentable over Grzeszkowski.

Claims 5 and 22 stand rejected under 35 U.S.C. § 103 as

being unpatentable over Grzeszkowski in view of Knaupp.

Claims 6 and 23 stand rejected under 35 U.S.C. § 103 as

being unpatentable over Grzeszkowski in view of Knaupp and

Cameron.

Rather than repeat the arguments of Appellants or the

Examiner, we make reference to the briefs¹ and answer for the respective details thereof.

¹ Appellants filed an appeal brief on July 7, 2000.

Appellants filed a reply brief on October 10, 2000. The Examiner mailed an office communication on November 30, 2001, stating the reply brief has been entered and considered.

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OPINION

After a careful review, we will not sustain the Examiner's rejection of claims 1 through 12 and 16 through 27 under 35 U.S.C. § 103.

Appellants argue on page 4 of the brief that Grzechowski fails to teach or suggest "wherein at least a portion of both of the two winding supports is defined by a single structure" as recited in claim 1. Appellants also argue on page 6 of the brief that Grzechowski fails to teach or suggest "wherein at least a portion of both of the two non-coaxial winding supports is defined by a single structure" as recited in claim 16.

On page 3 of the final rejection, the Examiner admits that Grzechowski does not teach a single structure for providing a pair of winding supports as recited in claim 1. Similarly on page 4 of the final rejection, the Examiner admits that Grzechowski fails to teach that at least a portion of both of the two winding supports is defined by a single structure as recited in Appellants' claim 16. The Examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two winding supports into a single structure as an obvious design choice because it has been held by case law that forming one

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piece in an article which has been formerly formed into two pieces and put together involves only routine skill in the art. The Examiner relies on *Howard v. Detroit Stone Works*, 150 U.S. 164 (1893). See pages 3 and 4, of the Examiner's final rejection. In the Examiner's answer, the Examiner maintains that *Howard v. Detroit Stone Works* holds that it is within one of design choices to form one piece of article which has formerly been formed into two pieces and putting them together involves only routine skill in the art. See pages 3 and 4 of the Examiner's answer.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ 1443, 1444 (Fed. Cir. 1992). *See also In re Plazack*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1076, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming

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forward with evidence or argument shift to the appellants.

Oetliher, 977 F.2d at 1445, 24 USPQ at 1444. *See also Pissacchi*, 745 F.2d at 1472, 223 USPQ at 788.

Then determining obviousness, "the [E]xaminer can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art or individual to combine the relevant teachings of the reference.'" *In re Lee*, 277 F.3d 1330, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), *citing In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" *In re Demickrak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617. "Where denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact." *Demickrak*, 175 F.3d at 999, 50 USPQ2d at 1617, *citing McGraw-Hill v. Information Systems & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

"In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and arguments." *In re Oetliher*, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on

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evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." *In re Lee*, 277 F.3d 1330, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). With these principles in mind, we commence review of the pertinent evidence and arguments of Appellants and Examiner.

Upon our view of the evidence, we find that the record fails to show any suggestion to lead one of ordinary skill in the art to make the modification as proposed by the Examiner. In particular, we note that the Examiner's assertion that this modification is a matter of design choice is only a conclusory statement not based on genuine issue of material fact. In particular, we note that the claims all require a single structure for providing a pair of winding supports. This structure corresponds to elements 155 and 150 shown in Figure 1. Furthermore, we note that this structure is not a nonfunctional limitation but indeed has a function. Appellants' specification discloses on pages 6 and 7 that the end plates 145 and 150 of the two winding supports 105 and 110 provide the function of maintaining the separation between the elements in

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operation and filling the fuse with sand. In particular, the end plates 145 and 150 prevent the movement of the elements which would adversely affect the operation of the fuse.

Upon our view of Grzeszkowski, we find no evidence within Grzeszkowski to those skilled in the art that the winding supports need to be defined as a single structure so as to prevent movement of the winding supports. In fact, Grzeszkowski teaches just the contrary that the winding supports are separate elements not connected together. Therefore, we find that the Examiner has no substantial evidence that it was either known to one of ordinary skill in the art or suggested to one of ordinary skill in the art to modify the Grzeszkowski reference to obtain the invention as recited in Appellants' claims 1 and 16.

Appellants' reliance on *Howard v. Detroit Store Works* for establishing a material fact is misplaced. In fact, our reviewing court has counseled the PTO that there are no *per se* rules. In *In re Ochial*, 71 F.3d 1565, 1570, 37 USPQ2d 1127, 1132 (Fed. Cir. 1995) the Examiner had relied on case law for a general obvious rule. The Federal Circuit stated that no such *per se* rules exist. See *Ochial*, 71 F.3d at 1570, 37 USPQ2d at 1132. Cir. 1995). The Court stated there is not "Darden

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obviousness rejections" or "Albertson obviousness rejections," but rather only section 103 obviousness rejections. *Zd*. This was further explained by our predecessor Court by stating "[n]ecessarily it is facts appearing in the record, rather than prior decisions in and of themselves, which must support the legal conclusion of obviousness under 35 U.S.C. § 103." *In re Cotter*, 354 F.2d 664, 667, 148 USPQ 268, 271 (CCPA 1966).

In view of the foregoing, we will not sustain the rejection of claims 1 through 4, 7 through 12, 16 through 21 and 24 through 27 under 35 U.S.C. § 103 as being unpatentable over Grzeszkowski. In particular, we note that all the claims recite that at least a portion of both the winding supports system is defined by a single structure.

Now we will turn to the rejection of claims 5 and 22 under 35 U.S.C. § 103 as being unpatentable over Grzeszkowski in view of Knapp and claims 6 and 23 under 35 U.S.C. § 103 as being unpatentable over Grzeszkowski in view of Knapp and Cameron. Upon our view of Knapp and Cameron, we fail to find that either reference teaches or suggests a single structure for providing a pair of winding supports as required by the claims. Therefore, we will not sustain these rejections as well.

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Therefore, we will not sustain the Examiner's decision in
rejecting claims 1 through 12 and 16 through 27 under 35 U.S.C.
§ 103.

REVEREND

KENNETH W. HAINSTON
Administrative Patent Judge)
)
)
MICHAEL R. FLEMING
Administrative Patent Judge)
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ANITA FELDMAN GROSS
Administrative Patent Judge)
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BOARD OF PATENT
APPEALS AND
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Application 09/240,712

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The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex. parte CONRAD L. O'RY, ROBERT C. CARLSON, JR.
and CHARLES MAYNARD

Appeal No. 1999-0439
Application 08/652,908

OR BRIEF

Before HARRISON, JERRY SMITH and BARRETT, Administrative
Patent Judges.
JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 2-8, 11-13 and 33. Claims 14-32 stand withdrawn from consideration as being directed to a non-elected invention. Claim 1 has been cancelled. Claims 9 and 10 have been indicated to contain

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allowable subject matter. An amendment after final rejection was filed on December 23, 1997 and was entered by the examiner.

The disclosed invention pertains to an adapter plate for holding cable adapters and which is mountable in an adapter plate bracket.

Representative claim 2 is reproduced as follows:

2. An adapter plate for holding cable adapters, said adapter plate being mountable in an adapter plate bracket, the adapter plate comprising:

a body portion for receiving the cable adapters, said body portion having an opening for receiving one of the cable adapters; and

at least one latching portion integral with said body portion for attaching said adapter plate to the adapter plate bracket.

The examiner relies on the following references:

Despard	1,930,610	Oct. 17, 1933
Thompson et al. (Thompson)	2,934,590	Apr. 26, 1960
Robbins	3,652,781	Mar. 28, 1972

Claims 2-8, 11-13 and 33 stand rejected under 35

U.S.C.

§ 103. As evidence of obviousness the examiner offers

Thompson taken alone with respect to claims 2-7, 12 and 13, Thompson in view of Robbins with respect to claims 8 and 33,

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and Thompson in view of Despard with respect to claim 11.

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Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

DEFINITION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon does not support the rejections as set forth by the examiner. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual

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determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Univocal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Bahland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hom. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of

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the

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arguments. See *Id.*; *In re Hednes*, 783 F.2d 1039, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Piasochi*, 745 F.2d 1469, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and *In re Ringhart*, 531 F.2d 1040, 1052, 189 USPQ 193, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

We consider first the rejection of claims 2-7, 12 and 13 based on the teachings of Thompson taken alone. These claims stand or fall together as a single group [brief, page 3]. With respect to representative, independent claim 2, the examiner asserts that Thompson teaches the claimed invention except for the latching portion of Thompson being integral with the body portion. The examiner finds that it would have been obvious to the artisan to make Thompson's latching portion 21 integral with Thompson's body portion 20,36 because it has been held to involve only routine skill to form an article in one piece which had formerly been formed in two pieces, citing *Howard v. Detroit Stove Works*, 150 U.S. 164

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(1893) [answer, pages 4-5].

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Appellants argue that faceplate 36 of Thompson is intended to be removable from clip 21 so that there is no suggestion in Thompson of making the faceplate 36 integral with clips 21 and 22. Appellants also argue that if the faceplate was integral with the clips in Thompson, the receptacle could not be removed which would destroy the accessibility sought by Thompson. Finally, appellants argue that the examiner's reliance on *Howard* is misplaced under the facts of this case (brief, pages 4-5). The examiner disagrees with each of these arguments (answer, pages 9-10).

We agree with the position argued by appellants.

Although Thompson would appear to be substantially unrelated to the invention disclosed by appellants, it is clear that the examiner has interpreted claim 2 so broadly that the examiner finds the invention as recited in claim 2 to be substantially met by Thompson. Appellants and the examiner have permitted the disposition of this case to be decided on the single question of whether it would have been obvious within the meaning of 35 U.S.C. § 103 to make the latching portion 21 of Thompson integral with the body portion 20,36.

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We simply cannot accept the examiner's position that it would have been obvious for two pieces that are intended to be separable to be made into a single piece. The examiner is effectively applying a *per se* rule of obviousness. While there are, no doubt, many circumstances where integrating two pieces into a single piece might be obvious under 35 U.S.C. § 103, the facts of this case teach away from such modification. There would be no motivation for the artisan to modify Thompson so that latching portion 21 is integral with body portion 20,36 because that would make it impossible to get access to the electrical wiring in Thompson. The only motivation to make such a modification to Thompson would be to improperly create the claimed invention in hindsight. Since there is no proper motivation to make the modification of Thompson proposed by the examiner, we do not sustain the examiner's rejection of claims 2-7, 12 and 13.

We now consider the rejection of remaining claims 8, 11 and 33. Claims 8 and 11 depend from claim 2 so that the discussion above applies equally to these dependent claims. Since neither Robbins nor Despard overcomes the basic

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deficiency of Thompson discussed above, we also do not sustain the examiner's rejection of claims 8 and 11.

Claim 33 is an independent claim which is rejected on the collective teachings of Thompson and Robbins. The examiner acknowledges that Thompson does not teach the first and second orientations which result in first and second oblique angles as recited in claim 33. The examiner cites Robbins as teaching an adapter which can be mounted in two orientations to yield two oblique angles. The examiner proposes to use the Robbins oblique surface with the Thompson adapter (answer, pages 7-8).

Appellants argue that the combination of Robbins with Thompson gives only a single angular orientation rather than two as claimed (brief, page 6). Appellants also argue that Robbins teaches away from an upwardly facing orientation because Robbins is attempting to make the electrical box waterproof and an upwardly facing orientation would defeat that purpose (reply brief, pages 3-4).

We agree with the position argued by appellants for the reasons set forth in the briefs. The collective teachings of Thompson and Robbins do not suggest the two orientations

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and two oblique angles as recited in claim 33. Therefore, we do not sustain the rejection of claim 33.

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In summary, we have not sustained any of the rejections of the appealed claims as formulated by the examiner. Therefore, the decision of the examiner rejecting claims 2-8, 11-13 and 33 is reversed.

RESULTS

KENNETH W. HAIRSTON
Administrative Patent Judge

JERRY SMITH
Administrative Patent Judge

LEE E. BARRETT
Administrative Patent Judge

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APPENDIX A

INTERPRETATIONS

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Appeal No. 1999-0439
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The opinion in support of the decision being entered today was not written for publication and is NOT binding precedent of the Board.

Paper No. 44

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BELMOT LAUFER,
JOHANNES FRIEDMAN,
JOHANNES FRIED,
HANS-PETER BAUER,
WOLFGANG DEBON,
ERWAL BIELEN,
PETER NORDHAUS,
and
PETER ZWEIFEL

Appeal No. 2002-0035
Application No. 08/861,918

ON BRIEF

Before ABRAMS, STAB, and MCQUADE, Administrative Patent Judges.
STAB, Administrative Patent Judge.

DECISION ON APPEAL

Appellants originally took this appeal from the final rejection (Paper No. 23) of claims 28-30, 32-40 and 42-46, all the claims then pending in the application. Subsequently, the examiner reopened prosecution (see Paper No. 39) for the purpose

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Application No. 08/861,918

of entering a new rejection against these claims, whereupon appellants appealed from that rejection. Upon further review (see page 2 of the answer), the examiner has withdrawn the rejection of claims 28-30, 33-40¹ and 46. Thus, the appeal now is directed only to claims 42-45.

Appellants' invention pertains to a conductor (claims 42 and 44) for providing a lead-through connection to the interior of a sealed housing, and the combination of a sealed housing and a conductor (claims 43 and 45) providing a lead-through connection to the housing's interior. A copy of appealed claims 42-45 is appended to appellants' brief.

The single reference relied upon by the examiner in support of the rejections maintained on appeal is:

Porter et al. (Porter) 4,805,420 Feb. 21, 1989

¹In Paper No. 39, the examiner rejected claim 32 under 35 U.S.C. § 112, second paragraph, as being indefinite in that it depended from canceled claim 31, and suggested that claim 32 be canceled. In the brief (Paper No. 42), appellants stated on page 8 that they agreed with this proposal; however, they did not formally cancel claim 32. In light of appellants' statement on page 8 of the brief regarding their agreement with the examiner that claim 32 should be canceled, the appeal as to claim 32 is dismissed. A formal amendment canceling claim 32 should be tendered upon return of this application to the Technology Center.

Appeal No. 2002-0035
Application No. 08/861,918

Claims 44 and 45 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Porter.

Claims 42 and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Porter.

DISCUSSION

1. The 35 U.S.C. § 102(b) rejection of claims 44 and 45

Porter pertains to a cryogenic vessel for cooling electronic components such as integrated circuits. As explained by Porter at col. 2, lines 31-67, with reference to Figures 1 and 2,

the cryogenic vessel 10 is made up of two insulated vessel portions 14 and 16 which may be symmetrical and which are separated by a flexible membrane 18 located between a pair of seals 19. The flexible membrane 18 has an integrated circuit (IC) socket 20 located near one end such that an IC chip 22 connected to the IC socket 20 is located within one of the immersion chambers 12

. . . Each symmetrical portion 14 and 16 includes an outer wall 32 and an inner wall 34. Next to the outer wall 32 is a layer of insulating material 36 such as a closed cell plastic foam which provides mechanical strength to the outer wall 32 and is sized to allow for a tight vapor seal between the symmetrical vessel portions 14 and 16 and the flexible membrane 18 trapped therebetween when the vessel portions 14 and 16 are clamped together by the bolts 24. A vacuum chamber 30 is defined by the inner wall 34 and a chamber wall 33 next to the insulating layer 36. Each vacuum chamber 30 is shaped to form an enclosure and is welded shut. The vacuum chamber 30 forms a layer of super insulation around the immersion chamber 12 of each vessel portion 14 and 16. The insulation layers 36 of the vessel

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portions 14 and 16, together with the flexible membrane 18 between the seals 19, seal the immersion chambers 12 from the ambient environment external of the sealed cryogenic vessel 10, thereby containing a cryogenic liquid 42 in the immersion chambers 12 and preventing frost formation.

The flexible membrane 18 may be a commercially available flex-circuit made of material which does not become rigid at cryogenic temperatures such as, for instance, a polyimide or Teflon material.

Anticipation is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of a claimed invention. *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 355, 388 (Fed. Cir. 1984). It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations of the claim be found in or fully met by the reference. *Kelman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

Appellants contend (supplemental brief, page 11) that Porter does not teach the new features of [the] present invention which are now defined in claims 44 and 45 but instead teaches a structure which is different, operates in a different manner, and does not have a conductor track formed as a bendable carrier film which

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provides a connection to a movable electrical component. The features of these claims are not disclosed in the patent to Porter and can not be derived [therefrom] . . .

The examiner responds (answer, page 5) that Porter discloses all of the claimed features of claims 44 and 45, specifically, housing 16, closing part 14, flexible film carrier 18 having conductor tracks 25, and seals 19 on either side of the flexible carrier film. The examiner also points out that claims 44 and 45 do not include any recitation of the carrier film being connected to a movable component.

Appellants have not specifically pointed out, and it is not apparent to us, precisely what claimed features of appellants' invention Porter lacks. In this regard, we note, as did the examiner, that claims 44 and 45 do not recite the carrier film as being connected to a movable electrical component. Based on appellants' vague argument that Porter lacks certain unspecified "new features" of the invention, and the examiner's well reasoned position that Porter discloses all claimed features of claims 44 and 45, we shall sustain the standing rejection of claims 44 and 45 as being anticipated by Porter.

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VI. The 35 U.S.C. § 103(a) rejection of claims 42 and 43 Claim 42 depends from claim 44 and adds that the seals on either side of the flexible carrier film are fixed thereto by vulcanizing to the carrier. Claim 43 contains similar language.

In rejecting these claims as being unpatentable over Porter, the examiner concedes that Porter does not disclose this claim feature. The examiner takes the position, however, that

In Howard v. Detroit Stove Works, 150 U.S. 164 (1893), it was determined that to form in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. On that basis, one of ordinary skill in the art would have found it obvious to have formed the conductor track carrier and the seals [of Porter] as an integral unit. Further, one of ordinary skill in the art would have readily realized that perhaps the best way to integrally form the seals with the conductor track carrier is to vulcanize the seals directly thereto, as is conventional and well known in the seal art. [Answer, pages 5-6.]

Rejections based on 35 U.S.C. § 103 must rest on a factual basis. *In re Werner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177-78 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). In making such a rejection, the examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. *Id.*

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In the present case, the examiner has failed to advance any factual basis to support the conclusion that it would have been obvious to one of ordinary skill in the art to modify the carrier film 18 of Porter in the manner proposed. The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification (see *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). Porter contains no such suggestion.

Concerning the examiner's citation of *Howard v. Detroit Stove Works* in support of the rejection, we note that the examiner incorrectly drew from this case turning on specific facts, a general obviousness rule: namely, that forming several pieces integrally as a single-piece is not considered to be patentable subject matter. No such *per se* rule exists.⁷ The examiner's citation of case law as a basis for rejecting claims

⁷ We direct the examiner's attention to *In re Occhiari*, 71 F.3d 1565, 1570, 37 USPQ2d 1127, 1132 (Fed. Cir. 1995) and *In re Browner*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) wherein the Federal Circuit has held that the claimed invention as a whole must be evaluated under the standards set down in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 466 (1966), and its progeny, and that the use of *per se* rules is improper in applying the test for obviousness under 35 U.S.C. § 103 since such rules are inconsistent with the fact-specific analysis of claims and prior art mandated by § 103.

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that differ from the prior art by reciting a single-piece vulcanized construction is improper if, as here, it sidesteps the fact-intensive inquiry mandated by 35 U.S.C. § 103. In the present case, one must determine if it would have been obvious to one of ordinary skill in the art at the time the invention was made to make Porter's seal and carrier film as a single vulcanized piece. Based on the evidence cited by the examiner (i.e., the Porter reference), we cannot accept the examiner's bottom line conclusion that the differences between the subject matter recited in claims 42 and 43 and Porter are such that the claimed subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 42 and 43 as being unpatentable over Porter.

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CONCLUSION

The rejection of claims 44 and 45 as being anticipated by Porter is affirmed.

The rejection of claims 42 and 43 as being unpatentable over Porter is reversed.

The decision of the examiner twice rejecting claims 42-45 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

NEAL E. ABRAMS
Administrative Patent Judge

LAWRENCE J. STRAB
Administrative Patent Judge

JOHN P. MCCONNARD
Administrative Patent Judge

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